



University of Hawai'i at Mānoa

Environmental Center

A Unit of Water Resources Research Center

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January 10, 1995

RP:0167

Ms. Rae M. Loui, Deputy Director
Department of Land and Natural Resources
Commission on Water Resource Management
P.O. Box 621
Honolulu, Hawaii 96809

Dear Ms. Loui:

Stream Channel Alteration and Diversion Works Permits
Waikolu Stream (TMK: 6-1-01:2)
Kalawao, Molokai

The referenced document proposes installation of a fish ladder at the Upper Diversion Dam of Waikolu Stream and amendment to the stream's interim instream flow standard.

We have reviewed this document with the assistance of David Penn, Geography, and Malia Akutagawa of the Environmental Center.

Fish Ladder Installation

Although the proposed fish ladder to facilitate migration across the dam appears to be a good idea, proponents of such ladders generally have not accounted for larvae of amphidromous species drifting downstream to continue their life cycle in the ocean. Do existing plans for the fish ladder provide for this phenomenon? Is there a mechanism which will prevent interruption of amphidromous life cycles by diversion of larvae into the Molokai Irrigation System?

The application states that this project is "the first of its kind and is considered as an experiment by the DLNR-Division of Aquatic Resources and U.S. Fish & Wildlife Service." In light of the fact that *o'opu alamo'o*, or *Lentipes concolor*, a threatened species and a candidate for the endangered species list, is a resident of Waikolu Stream along with other native species such as *hihiwai* and other *o'opu*, this "experiment" should not be

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founded on mere speculation but on studies conducted in similar environments using fish ladders.

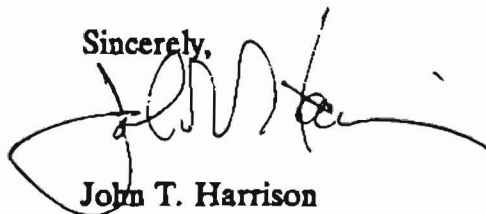
Therefore, we recommend that previous studies be evaluated and a study of biological impacts unique to Waikolu Stream be conducted before actually installing a fish ladder. In the long run, these precautions will ensure that money will not be wasted on a project that may prove detrimental, rather than beneficial, to the aquatic life residing in Waikolu Stream.

Amendment to Interim Instream Flow Standards

Our reviewers expressed concern over the apparent dearth of information provided in the application. A record of average monthly streamflow is unavailable, yet an increased withdrawal of 109,000 gallons per day (GPD) is proposed in addition to current withdrawals of 744,000 GPD. Moreover, the application reveals that "impacts are unknown at this time until the results of a biological and hydrologic monitoring program is available." We strongly suggest that this petition be denied until the monitoring program has ended and results have been interpreted. Approval should only be given if the results show that the proposed increased water withdrawals will not significantly affect stream life.

Thank you for the opportunity to review these applications. Attached for your information is a copy of our December 8th review of the Draft EA on the Waikolu Valley Wells Development.

Sincerely,



John T. Harrison
Environmental Coordinator

Attachment

cc: OEQC
Roger Fujioka
David Penn
Malia Akutagawa